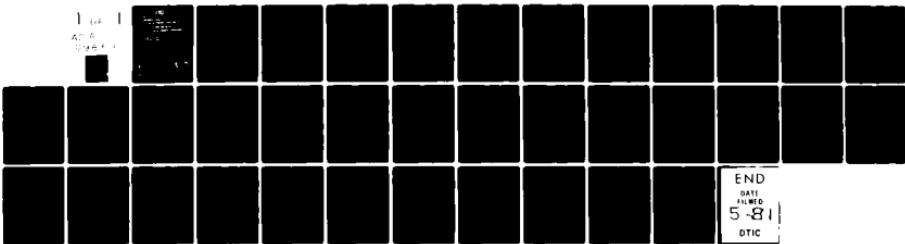


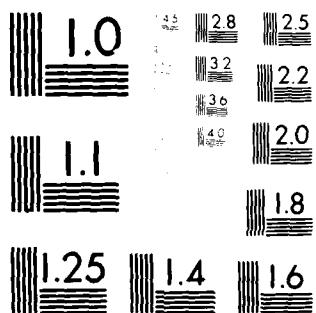
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EDUCATIONAL PAPER

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US ARMY WAR COLLEGE

CARLISLE BARRACKS, PENNSYLVANIA

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THE DOCTRINE OF WAR:  
ITS RELATION TO THEORY AND PRINCIPLES.

20 APRIL 1961  
ACM 6002

30 Dudley W. Knox  
Harry G. Summers, Jr.  
Wallace P. Franz

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This volume contains the findings  
pertaining to the doctrine of war,  
the theory and principles of war,  
and the application of these to  
the conduct of war.

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## FOREWORD

This series of "Occasional Papers" provides a means for the publication of essays on various subjects by members of the Strategic Studies Institute, US Army War College.

This Occasional Paper was prepared as a contribution to the field of national security research and study. As such, it does not reflect the official position of the Strategic Studies Institute, the US Army War College, the Department of the Army, or the Department of Defense.



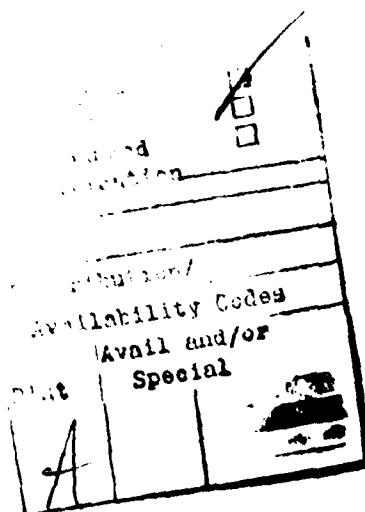
ANDREW C. REMSON, JR.

Colonel, CE

Director, Strategic Studies Institute

## **THE DOCTRINE OF WAR: ITS RELATION TO THEORY AND PRINCIPLES**

Reprint of Lieutenant Commander (later Commodore) Dudley W. Knox's 1915 article, "The Role of Doctrine in Naval Warfare" with introduction and commentary by Colonel Wallace P. Franz, Infantry and Colonel Harry G. Summers, Jr., Infantry.



## BIOGRAPHICAL NOTE

Colonel Wallace P. Franz, Infantry, United States Army Reserve, holds bachelor's and master's degrees in military history. An infantry company commander in the Korean war, he served as a district advisor in the Vietnam war. Now serving an active duty tour on the faculty of the US Army War College, he has served on the consulting faculty in the Departments of Tactics and Strategy at the US Army Command and General Staff College and as a political-military action officer as a mobilization-designee on the Army General Staff. An avid military historian and student of military tactics and strategy, he has contributed to Army doctrine and to Army strategic studies both at Leavenworth and Carlisle. Among his decorations and awards are the Combat Infantry Badge for both Korea and Vietnam, and the Bronze Star Medal.

Colonel Harry G. Summers, Jr., Infantry, a designated Army strategist, holds bachelor's and master's degrees in military arts and science. An infantry squad leader in the Korean war, he served as a battalion and corps operations officer in the Vietnam war and later as a negotiator with the Viet Cong and North Vietnamese in Saigon and Hanoi. Now on the faculty of the US Army War College, he has served as an instructor of strategy at the US Army Command and General Staff College, a political-military action officer on the Army General Staff, a member of General Creighton Abram's strategic assessment group, and, from 1975 to 1979, in the office of the Army Chief of Staff. His articles on strategy have appeared in *Army*, *Military Review* and the *Naval Institute Proceedings*. Among his decorations and awards are the Combat Infantry Badge for both Korea and Vietnam, the Silver Star, the Legion of Merit, the Bronze Star for valor and two Purple Hearts for wounds received in action. He is an associate member of the International Institute for Strategic Studies.

## INTRODUCTION

In February 1980, the Strategic Studies Institute published an occasional paper, Principles of War: The American Genesis. A reprint of a 1934 article by Colonel (then Major) Edward S. Johnston, Infantry, with our introduction and commentary, this paper discussed the difference between principles and methods and argued the importance of principles to enhance the battlefield effectiveness of the Army. Shortly after its publication Lieutenant Colonel Michael E. Ekman, Infantry, a student in the US Army War College Class of 1981, called to our attention a complementary article on the importance of doctrine written in 1915 by Commodore (then Lieutenant Commander) Dudley W. Knox, United States Navy.

Through the assistance of Robert S. Wood, Chairman of the Strategy Department, Naval War College a copy of Commodore Knox's article was obtained. With the permission of the editor, Naval Institute Proceedings, it is reprinted in its entirety with our marginal commentary.

Used as a student text at the Naval Command and General Staff College in 1973-1974, this article emphasizes the relationship between principles and doctrine:

Military doctrines are beliefs or teachings which have been reasoned from principles; that is, they flow from principles as a source. They are intended to be general guides to the application of mutually accepted principles, and thus furnish a practical basis for coordination under the extremely difficult conditions governing contact between hostile forces.

Commodore Knox went on to warn that without a point of origin in principles and doctrine "we are as uncertain of our bearings as a vessel in a fog." A recent Army War College study of strategic operations in Vietnam rediscovered the truth of this observation. Failure to apply the principles of war contained in our own Field Service Regulations were a major contributor to our strategic shortcomings.

Although written almost three-quarters of a century ago to enhance the role of doctrine in naval warfare, Commodore Knox's paper is particularly appropriate to today's Army, since both the Army's strategic doctrinal manual (FM 100-1, The Army) and tactical doctrinal manual (FM 100-5, Operations) are under revision. As professional military officers it is imperative that we understand that, as Commodore Knox warned, "to reach the ultimate goal of war efficiency we must begin with principles, conceptions and major doctrines, before we can safely determine minor doctrines, methods and rules. We must build from the foundation upwards not from the roof downwards."

Colonel Wallace P. Franz, Infantry  
Colonel Harry G. Summers, Jr., Infantry

Carlisle Barracks, Pennsylvania  
17 March 1981

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Prize Essay, 1915

## THE RÔLE OF DOCTRINE IN NAVAL WARFARE.

*Motto:* "Let us learn to think in the same way about fundamental truths."—DARRIEUS

By LIEUTENANT COMMANDER DUDLEY W. KNOX, U. S. Navy

The American Navy acknowledges no superior in its ability to steam and to shoot. If nothing else was required of a fleet of ships in naval warfare we might rest securely in the belief that we are as well prepared for war as any possible antagonist. Strange to say, not many years ago this fallacious belief did permeate the service and was based upon the above narrow, unsound and short-sighted assumption.

Within the last few years, however, a fortunate awakening has come about. The navy is comprehending with greater clearness every day, that a fleet is something more than a mere collection of ships; that a bare "ship for ship" superiority over a possible enemy is not a guarantee of victory; that before the ships are ready to go into action, no matter how efficient individually, they must be welded into a body, whose various members can be well controlled from a single source and can act collectively as a unit free from embarrassing internal friction; and that the problem of the proper utilization of the abilities to steam and to shoot—that is, the problem of command—is not only less elementary but also much more difficult of solution than any yet undertaken by us.

Commodore (then Lieutenant Commander) Dudley W. Knox graduated from the United States Naval Academy in 1896. He served in the Spanish-American War and in World War I where he was awarded the Navy Cross, the Legion of Merit, the British Order of St. Michael and St. George and the Italian Order of St. Maurice and St. Lazarus. He graduated from the Naval War College in 1913 and served on its faculty from 1919 to 1920. Retired as a Captain in 1921, he remained on duty with the Navy Department and was promoted to Commodore (Brigadier General) in 1945. In addition to numerous articles Commodore Knox was the author of several books, including *The Eclipse of American Sea Power*, *The Naval Genius of George Washington*, and *American Naval Participation in the Great War*, an official work on World War I.

#### COMMAND AND DOCTRINE

The importance of good management to any organization is generally recognized and well understood. In the industrial world, the survival of any concern and production by it of adequate returns for the capital invested, are matters which even the man on the street will admit without argument to be very intimately connected with management. As a rule, he will go even farther and declare it normally impossible for a business to enjoy reasonable prosperity without careful and efficient management. The importance of the latter is indicated not only by the almost universal modern tendency to renovate management, and to adopt more effective, systematic and so-called "scientific" methods of supervision and direction, but also by the fact that the beneficial effects of good management are most apparent in "lines" of business where competition is keen and profits not large. While in exceptional cases an industrial firm may prosper in spite of bad management, it is nevertheless true that management is one of the most important, if not indeed *the* most important, of the factors which comprise industrial organizations.

The necessity for good management in modern business has become universally admitted as axiomatic. But this general recognition unfortunately does not extend to some other forms of human activity, in all of which the principle is equally applicable that efficient planning and direction are essential to great success. From the trivial routine affairs of private individuals to the great critical matters of state, management, good or bad, is a cardinal element in the results produced.

The business of war, either on land or water, is no exception to this rule. On the contrary, the relative importance of management, as compared with the other ingredients of excellence, is probably greater in war than in any other form of endeavor. This truth is readily understood, even by civilians, when it is applied to the administrative management of a large fleet or army. The professional mind, however, will better appreciate that military management properly includes not only the business of administration but also the leadership of forces engaged, or about to engage, in actual hostilities. Of the two, the latter, or more purely military function of command, is more essential to military success and also requires a greater measure of "scientific management."

Note the "modern" argument about management versus leadership and their interrelationship in the *business of war*. As early as 1915 Commodore Knox was drawing from the "scientific" management techniques just then gaining ground in American industry.

The superior importance of good leadership over good logistical administration, in so far as a favorable military issue is concerned, is well illustrated in the naval campaign between Suffren and Hughes. The former admiral was most of the time without a base and unable to obtain sufficient supplies. He constantly contended against scurvy, and an almost utter lack of medicines, provisions and materials of all sorts. His crews were greatly overworked and many ships unfit for sea. However great his administrative ability may have been, it was practically eliminated as a factor in the operations by the conditions which rendered his fleet destitute of the most vital products of administration. Yet Suffren succeeded through the genius of his leadership in winning from an amply provided and well administered fleet that was superior to his own in size and gun power. The armies of the Potomac and of Northern Virginia in our Civil War furnish another example of the point in question. The former had the advantage during most of the war of the splendid organization and administrative system introduced by McClelland, and had bountiful supplies. Yet during three years of war this army was so poorly led as to be unable to win from its less numerous Southern opponent, which was unquestionably poorly administered and supplied, but well led.

Good leadership or command, as distinguished from administrative management, is then obviously a cardinal requisite to successful military operations. It properly includes not alone the efficiency of the person in chief command, but also that of the chain of subordinate commanders which theoretically connects the mind of the chief to each individual in the fleet or army. Command implies control and direction by a leader; but before this is possible with a large number of units, they must be divided into groups, each under the command of a subordinate leader. Each group may be again similarly subdivided and commanded, and if the force be large it may be necessary to repeat the process of subdivision many times. By means of such a so-called "chain of command" it becomes possible to carry into execution the will of the highest leader in a manner which could not otherwise be done, and to ensure that the entire organization acts co-ordinately and harmoniously as a unit.

Organization, however, cannot alone produce unity of action in accordance with the desires of the chief. It merely furnishes

The naval campaign between the great French Admiral Suffren and the English Admiral Hughes was fought off the coast of India in 1781-1782.

The same analogy could be made about Rommel in the Western Desert. Operating on a logistics shoestring he was able to tie down superior British forces for two years in 1941 and 1942.

It is instructive to note how commanders in the past have manipulated the balance between the *yin* of administration and logistics and the *yang* of tactics and strategy so as to achieve battlefield success.

*Organization as an aid to unity of action.*

the mechanism for transmitting, interpreting, directing and executing instructions. It is little more than a bony skeleton, which, though it be an essential part of the organism, must nevertheless be augmented by flesh and sinew and infused with spirit before it can successfully accomplish its mission of life-like co-ordinated activity conformable to the will of the directing mind.

Moreover, in a military organization it is not sufficient that the "officer-body," which forms the chain of command, shall merely transmit, interpret and execute the orders which are received. They must, in war, frequently act on their own initiative in anticipation of the desires of higher authority. From the very nature of extensive military operations, whether they be afloat or ashore, the commander of the whole force cannot possibly have cognizance of events immediately upon their occurrence. His vision is too limited and his communication system too precarious and slow. Therefore, should he attempt specific personal direction to meet every contingency as it arises, his attacks will be too late to take full advantage of favorable situations presented, and his parries dangerously tardy. Unfortunately in warfare, and more especially in naval warfare, nearly all of the important situations which confront subordinate commanders are of the type which do not admit of delayed decisions. Many of them arise far distant from the commander-in-chief, or occur under other circumstances, such as tactical combat, which make it impossible to defer decision and action while the highest authority is being informed and until his instructions have been received in reply. The time factor is so very pressing and acute in naval operations, particularly in naval battle, that it is normally imperative for the subordinate commander himself to decide and to act, even before his superior can be acquainted with the special situation which has been met. The classic example of Nelson's initiative at the battle of St. Vincent is far from being the only illustration in history of the necessity for independent action by subordinates in order that advantage may be taken of local situations to assist the efforts of the whole force. Almost every large naval battle ever fought abounds in incidents which illustrate, either negatively or affirmatively, the tremendous importance of such measures being taken by subordinate commanders. The most recent example is the failure of the commander of the Russian second division at Tsushima to form column on the first division at a time when

Knox's stress on the importance of initiative is echoed in the Army's newly revised doctrinal manual, FM 100-5, *Operations*.

A naval campaign in the Russo-Japanese War of 1904.

such maneuver was manifestly necessary to avoid a disadvantageous tactical situation. On account of difficulties with signalling, Rodjesvensky was prevented from directing this maneuver.

Of course, in advance of any major operations, the commander-in-chief will usually issue general instructions intended to govern situations that can be anticipated. But the futility of depending upon such instructions, unless they be supplemented by many other things, is thoroughly understood by every officer of experience and every student of history. The possible eventualities are so numerous and complex as to render it difficult in the extreme to foresee many of the critical situations which will arise. Furthermore, when instructions aim to provide against every contingency they are likely to become so comprehensive and voluminous as to be confusing and difficult to remember. Under the stress of hostilities they are frequently forgotten or misinterpreted, and in some cases are deliberately disobeyed either on account of conditions slightly different from those anticipated in the order, or because of conviction of their unsoundness.

The difficult problem connected with the art of command, however, is *not* how to ensure execution of such wishes of the commander as circumstances permit to be precisely expressed *in time* to his junior officials. That is relatively simple and easy. Discipline ensures obedience, and the organization provides for the orders being transmitted to the proper places and executed by the forces intended, thus securing due co-ordination and unity of action, which are always required for the attainment of military success. This problem is one which has been always efficiently solved in our service; our whole system of command is built to satisfy these artificial conditions, with the result that whatever has been undertaken afloat in peace has been well done. Our success during war has also been gratifying, but it should be well marked by such of us who want to make of the navy a real and dependable insurance to our country, that history reveals no occasion upon which a large American fleet has been opposed by a strong, aggressive and numerous foe. It is only in such operations that the true test of our system of command can be made. If, as the author believes, the present system fails to anticipate and to adequately provide for the conditions to be expected during hostilities of such nature, it is obviously imperative that it be

Warning against the tendency to build a system designed only to satisfy the "artificial conditions" of peacetime, former Army Chief of Staff General Bernard W. Rogers warned in 1979 that we must build the Army for wartime and then adapt it for peacetime operations rather than vice-versa. Clausewitz tells us that, unlike peacetime operations, the most significant characteristic of war is uncertainty.

modified; wholly regardless of the effect of such change upon administration or upon the outcome of any peace activity whatsoever.

The chief difficulty encountered in the exercise of command is that resulting from a critical situation which imposes upon subordinate commanders the necessity of deciding for themselves the action to be taken, and of carrying their decision into execution, before reference can be made to higher authority. Under these circumstances any system of command is severely tested, and is sure to break down unless it provides adequately for them. If in such cases the decisions and actions of the various subordinate commanders harmonize with the desires of the commander-in-chief—that is, if each one of them does what their chief would do were he present in person—then due co-ordination is assured and the efforts of the whole command reach their maximum of effectiveness through the resulting unity of action. In other words, the system of command then furnishes a satisfactory basis for the control of the whole force and is adequate to ensure that the will of the supreme commander governs, even in spite of the anomalous condition of its being done in advance on the expression of that will.

It is clear that subordinates cannot be depended upon to comprehend the wishes of the commander-in-chief with respect to situations confronting them, unless they have to guide their decisions something much better than instructions issued before the event and, therefore, necessarily lacking in completeness and applicability. Other measures are indispensable, chief among which is a proper preparation of the minds of the body of officers.

Individually, the officers should be conversant with the theory of war, and familiar with its history and the lessons derivable therefrom. That is to say, education in the art of war, as distinguished from the other numerous branches of the military profession, is a necessary step in the preparation of responsible participants in war. The officers should also be trained in the mental processes which are demanded by active hostile operations. Until the mind receives such training no decision can be in any sense automatic, but must be the result of slow and labored reasoning. Frequently in war, and especially in naval war, it is imperative that decisions be made in advance of reflection, and under the stress of grave responsibility and danger. In such circum-

The effects of modern electronic warfare may very well cause the integrated battlefield of the future to resemble the battle arena described by Commodore Knox in 1916.

The importance of theory undergirded by knowledge and appreciation of the art of war.

stances the functioning of the mind is vastly better if it has been previously prepared by practice in frequent quick decisions involving similar tactical or strategic factors.

In addition, each officer should have previously acquired a spirit of intense loyalty to the plans of his superiors. Loyalty is not merely a moral virtue; it is also a very great military necessity. In the absence of universal loyalty within an organization, the momentous effects which flow from united action are impossible. When loyalty permeates a command its "driving power" is vastly increased, not only because of the greater effect consequent upon cohesive effort but also on account of the stimulating influence upon individual effort.

Besides the preparation which the individual should receive, it is also necessary that the "team mind" should similarly be made ready in advance, before the acts initiated by subordinates can be counted upon to harmonize with the intentions and plans of their common superior. Of course, they should all receive the commander's general instructions and also be acquainted with the plan which such instructions aim to carry out; manifestly, such knowledge is necessary before independent actions can be made to conform thereto. But decidedly something more than last minute preparation of this sort is required. The interpretation of the orders and of the plan by each one of the subordinates should be the same, and so complete and accurate that awkwardness of language, inaccuracies of expression, omission of details or even of generalities, or other defects of the written or verbal instructions, shall not prove a bar to each one knowing the true intentions of his chief, nor to a knowledge of what each and every one of them will think and do under foreseen circumstances or in a sudden and unexpected contingency. Finally, human nature is so constituted that perfect loyalty and co-operation is almost impossible unless the participants are inwardly convinced of the correctness of the plan and methods under which they are mutually acting.

Obviously, then, harmonious and co-ordinated effort under the pressure of immediateness and during the stress of hostilities, on the part of commanders between whom communications are precarious, is difficult, if not impossible, unless there exists a bond of highly developed mutual understanding and common conviction. The development of such a bond, like the preparation of the indi-

Note the importance of "loyalty" in obtaining unity of effort on the battlefield.

An important point that is often overlooked. Note the relationship between loyalty and cooperation and the need to convince subordinates of "the correctness of the plan."

vidual mind, must necessarily be done during the years of peace preceding war. Of course, mutual understanding and conviction will be accomplished to some degree when the various subordinate commanders are men who have been qualified for their positions by study of the art of war and by training in war games and simulated maneuvers; the loyalty of all to the promulgated plan will also promote common understanding. Yet a much deeper and more comprehensive understanding is required before a band of subordinates can be ready to undertake that kind of co-ordination demanded by complex and rapidly moving military operations on a large scale. The body of junior commanders must be almost literally of one mind with their commander-in-chief and with each other if frictionless and automatic team-work is to be obtained. Their direction at every point should be unhesitatingly the same as would be given by the commander-in-chief himself were he present. Then, and only then, can the organization fully accomplish its purpose—unity of action in accordance with an expressed plan.

The need for this type of understanding, as well as for the resulting concerted action, should be apparent to anyone giving mature thought to the subject of command. It is recognized as a necessity in the principal foreign military organizations, and they attempt to supply the deficiency through what has been termed "doctrine." Commander Schofield of our navy has said, "In a military service, where many intellects *must* co-operate towards a single aim and where the stress of events forbid the actual interchange of ideas, when the need is most felt, there must be a governing idea to which every situation may be referred and from which there may be derived a sound course of action. It is only thus that the full driving power of an organization can make itself felt." Again, in discussing the situation confronting the commander of a fleet on the night preceding a probable battle, the same officer says, "No verbose instructions that he may issue now can have the remotest chance of converting an organization of form into an organization of intellect and spirit. Such a change is a matter of long and patient educational effort that eventually centers around a doctrine of military conduct to which every act either of preparation or of execution is automatically referred. When such a stage of development is achieved a spirit of confidence becomes diffused throughout the service that invests it with a moral power of the greatest value."

Note the importance of peacetime training in building unity of effort.

The importance of doctrine.

For some unaccountable reason the American Navy, and to a somewhat less degree the American Army, have never seriously endeavored to indoctrinate their officers, and thus to furnish a basis for harmonious decisions during hostilities. It is all the more striking that the navy has failed in this respect, because of the supreme importance of the time factor afloat. With us "time is everything," even more than with Nelson, whose conspicuous successes were largely due to the high degree of mutual understanding that existed among his subordinate commanders; and Nelson's indoctrination, more than anything else, made such understanding possible.

Probably all will concur in what has been so far said. It may be summarized briefly as follows:

1. Good management is a cardinal requisite to the success of any organization, industrial or military.
2. Military management comprises both administration and command, of which two the latter is more essential to successful military operations.
3. Command depends not alone upon the orders and acts of the officer directing the entire operations, but also in great measure hinges upon the actions of the chain of subordinate commanders.
4. To properly exercise their command function the officer corps as a body must act unitedly. As a preparation to do this they must be educated in the art of war and trained in its conduct. They must be loyal to their commander-in-chief and his plans, and must possess a deep understanding of the mind of their common chief and of each other.
5. The degree of mutual understanding necessary to unity of action by a large organization, military or naval, can be best assured through previous indoctrination.

It is the purpose of this paper to examine into and to discuss the question of doctrine.

#### DOCTRINE DEFINED AND EXPLAINED

In an unsigned article in the *Edinburgh Review* of April, 1911, the statement is made that "a sound, comprehensive, all-pervading doctrine of war is as important to an army as its organization." This is true to an even greater extent for a navy and it is, therefore, somewhat extraordinary that both the American military services as a whole are unfamiliar even with the meaning of the

"Education in the art of war" is the very purpose of the Army War College.

term "doctrine" when used in its purely military sense, and fail to comprehend its importance as well as its rôle in bringing about timely and united action in the midst of hostilities.

To many officers, doctrines are synonymous with principles; to others, the word suggests methods; and still others confound it with rules. While all of these are somewhat related none of them may properly be considered as having the same military meaning.

The object of military doctrine is to furnish a basis for prompt and harmonious conduct by the subordinate commanders of a large military force, in accordance with the intentions of the commander-in-chief, but without the necessity for referring each decision to superior authority before action is taken. More concisely stated the object is to provide a foundation for mutual understanding between the various commanders during hostile operations.

By recourse to the dictionary it may be learned that doctrine means "whatever is taught; what is held, put forth as true and supported by a teacher, a school, or a sect; it is a general body of instructions; doctrine denotes whatever is recommended as a *speculative* truth to the belief of others; a doctrine may be true or false, it may be a mere tenet or opinion." One meaning of doctrine is a "principle" or "body of principles," but that is not the sense in which it is employed when applied to the art of war by European military forces. Some military writers and translators have caused great confusion by using the term as a synonym for principles. Military doctrines are beliefs or teachings which have been reasoned from principles; that is, they flow from principles as a source. They are intended to be general *guides to the application* of mutually accepted principles, and thus furnish a practical basis for co-ordination under the extremely difficult conditions governing contact between hostile forces.

A principle is a "fundamental truth as a basis of reasoning; the cause, source or origin of anything." Obviously, there is a great difference between a principle and a military doctrine, notwithstanding that they are related. It has been aptly said that the difficulty with fundamental principles lies not in their comprehension but in their application. Under any given circumstances fundamental principles might be correctly applied in a number of materially different ways, depending upon the varieties of doctrines held. Furthermore, in war the number of possible

Note that the *principles of war* derived from military theory form the basis for military doctrine.

acceptable solutions to a situation is increased not alone by the number of possible applications of the several principles involved, but as well by the variations in the relative importance which may be assumed for each.

One of the best illustrations of the wide differences of doctrine which may be acceptably deduced from the same principles, is afforded by the so-called German and French doctrines of war, which at present govern the operations of the respective armies of these two countries. Both doctrines were evolved from exhaustive studies of Napoleonic methods of conducting war, so that both flow not only from the same principles but also from the methods of one man.

Briefly stated the German doctrine of war is that of envelopment. It was argued by their Great General Staff that the power of modern weapons has greatly decreased the vulnerability of the fronts of armies and correspondingly increased the weakness of their flanks. Hence the hostile flanks were chosen as the principal objectives for concentrated attacks. It was deemed preferable that superior numbers be utilized to envelop both flanks of the enemy, while at the same time containing his center. Such procedure necessitated initial deployment by large semi-independent groups over a very wide front, and consequently increased the danger of defeat in detail should the enemy succeed in concentrating on one or more unsupported detachments. To meet this grave danger the several detached parts of the army were each made of such size and character as to be theoretically indestructible, no matter how powerful its immediate opponent, for a time at least long enough to ensure support from adjacent detachments. An army corps of about 40,000 men of all arms was selected as the minimum size of each semi-independent unit.

Due to its wide deployment the control of the whole army by the commander-in-chief was necessarily weakened and rendered precarious, and this fact also seemed to increase the danger of defeat in detail. To overcome this defect the corps commanders, as well as indeed all officers in the German Army, were educated and trained in the same school of thought (indoctrinated), so as to reduce the necessity for greatly centralized command and to always insure unison of thought and co-operative action among separated subordinates under all circumstances. In order to further lessen the danger of defeat in detail, the initiative was to

Modern military theory developed out of the analytic study of the campaigns of the French revolutionary and Napoleonic wars. The most enterprising and thorough students of this period were the Prussian officers Scharnhorst and Clausewitz.

be taken and maintained at all cost. Whenever encountered the enemy was to be vigorously attacked and pressed without awaiting orders, so as to deny him the initiative and also to relieve pressure at points where he may have concentrated. The ultimate aim of the several columns which started their march on a wide flung front was to concentrate simultaneously on the battlefield itself, marching from different directions and enveloping both flanks of the numerically inferior enemy.

In order that a number of co-equal semi-independent corps may avoid defeat in detail during the earlier part of such operations, and may finally concentrate simultaneously and successfully from exterior lines on to the battlefield against an aggressive enemy, it is obviously requisite that great skill and perfect co-ordination be displayed on the part of the detachment commanders. They must continuously exercise enterprise, boldness, aggressiveness and a high degree of initiative. But above all they must *think harmoniously*. The actions of each commander must harmonize with those of each of the other co-workers. In reaching any decision its effect upon the operations as a whole must take precedence over the local situation.'

In other words, to wage such warfare successfully it is necessarily essential that the subordinate commanders be previously prepared as a *team*. Manifestly, the work of preparation should be done before the army takes the field—that is, during peace. Nearly all officers must, through study, learn to know war thoroughly from every aspect, and must be trained together as well as it is possible to do by means of sub-caliber games and field maneuvers.

If, during such exercises in common, differences of opinion develop, as will almost invariably happen, personal preference and belief must for the sake of team success be submerged whenever they conflict with the reasoned and matured conclusions of the majority. Loyal acceptance by all of the teachings of their school of thought is necessary before unity of action can be attained during collective activities. In other words, indoctrination is essential to adequate co-ordination.

How successful the Germans have been in obtaining the requisite co-operation in spite of the difficulties of so doing which their doctrine of war creates, is attested by the brilliance of their work in 1866 and 1870. True, there were certain exceptions, and

The German term for this concept is "Auftragstaktik" (mission tactics) i.e., responsibility to carry out the mission concept of his superior.

Field Marshal von Moltke's emphasis on *harmonious thinking* derived from theory, principles, and doctrine as the key to battlefield initiative and freedom of action has been rediscovered by such current critics of the Army as Colonel (USAF, Retired) John R. Boyd and others.

Field Marshal von Moltke as chief of the Great General Staff prepared the officer corps for these campaigns. His teaching was philosophically based on the works of Clausewitz.

at least one prominent general was removed from his command either because of his unwillingness to accept the common doctrine or else his inability to adhere to it. The few exceptions, however, serve chiefly to emphasize with greater force the vital necessity of prescribing doctrine and accomplishing indoctrination, before command of large forces can be successfully exercised. The history of the present war is hardly yet begun and facts are difficult to obtain, but the phenomenal advance of the Germans during the first month of fighting indicates remarkable co-ordination between the various corps and army commanders.

Attention is here parenthetically called to the essentially similar conditions, as far as command is concerned, between sea warfare and the situations on land created during operations conducted in conformity with the German doctrine of war. In both cases direct control by the commander-in-chief is impossible and his influence is, therefore, liable to crumble. His principal work is of necessity limited to the period of preparation and to the earlier phases of hostile contact. Once action is joined in earnest the commander-in-chief must, both on account of the difficulties of communication and of the time factor, trust the outcome almost wholly to his subordinates; it is then too late for him to materially change the course of events. Hence it soon becomes the function of a number of co-equal subordinate commanders to act practically independently, but at the same time to make their respective decisions and acts harmonize with the operations of all the others, while also furthering the plan of the commander-in-chief which has been necessarily expressed in but very general terms. We on the water should particularly heed the fact that this problem in co-operation is not capable of satisfactory solution unless doctrine plays a conspicuous part as one of the favorable factors.

As will be explained later, the French doctrine of war prescribes extreme centralization of command and aims at the control of the whole army by two men supposed to keep constantly in communication with each other and with the various detachment commanders. In operations conforming to this doctrine the situations are comparable to those of a navy operating only during peace, and a study of the French doctrine is, therefore, not so profitable to naval officers seeking the best means for conducting a fleet during war. The principal reason why great centralization is impracticable for hostile operations afloat is not because the

In contrast to the German emphasis on initiative, the French tried to eliminate chance by over-control of subordinates.

various commanders are separated, nor even because communication between them is imperfect, but because of the profound influence of the time factor upon water strategy and especially in water tactics. The exigencies created by the necessity for each situation being met immediately renders centralization fatally weak and makes it of supreme importance that the whole officer corps be indoctrinated in order that it may be capable of synchronous initiative.

The French doctrine of war was developed after the reverses of 1870, and pretends to be a reply to the German doctrine as well as a more accurate interpretation than the latter of Napoleonic war. In the opinion of many profound students the French conception is the sounder for shore work, but is more precarious in that it depends for success upon two men having ability amounting almost to genius; whereas the German doctrines may be put into brilliant effect by men whose intelligence and ability are not necessarily extraordinary.

The French doctrine is based upon application of the principle of the economy of forces. The Germans seek the offensive blindly and vigorously at all points at all times and from exterior lines, whereas the French aim is to husband their troops and to preserve interior lines during a period while the strength and disposition of the enemy is being ascertained. Once the necessary information is obtained however and the time is deemed by the commander-in-chief to be opportune, conservation ceases and the end in view becomes a vigorous attack by almost the whole concentrated army (all the stronger for the interior position and the previous conservation) against the point chosen by the commander-in-chief with the aid of the information which he has awaited. The gathering of the information so necessary to the success of such a grand stroke is entrusted to the commander of a very strong advance guard, composed principally of cavalry and other mobile troops. The task of this officer, and of those under him, is difficult in the extreme. The desired information cannot be obtained without penetrating the enemy's screens, yet an engagement of so serious a nature as to prematurely force the involvement of the entire army must be carefully avoided. The introduction of air craft into warfare has no doubt simplified the task of the advance guard commander, but nevertheless he must be an officer of rare judgment and brilliant attainments. It is

The French system failed in World War I and World War II in not having the flexibility required for modern war. They relied on an archaic chain of command rather than encouraging the initiative of subordinate commanders.

Commodore Knox errs in his analysis. The Germans did not attack "blindly" and in fact were specifically warned against such tactics by von Moltke. Their attacks were directed against the enemy's flanks and rear.

necessary that he and the commander-in-chief be exceptionally brilliant men, while other commanders in the army will have few demands made upon their ability beyond that required for the specific execution of orders received.

In the present war it will be remembered that the French left wing retreated continuously from the Belgian border to Paris without once making a decided stand or taking the offensive in force. Probably this was done in accordance with the above described doctrine, their forces being conserved and the interior line being maintained until the commander-in-chief deemed his information sufficiently complete to warrant making a concentrated counter stroke. With heavy reinforcements from Paris the annihilation of the German right wing was attempted with great vigor and apparently came near to succeeding.

Plainly the two doctrines of war described above are directly opposite, notwithstanding the fact that both pretend to be applications of the principles which brought Napoleon his successes, as well as adaptations of his methods to modern conditions. It is probable that studies by other minds of the same master might lead to doctrines differing radically from both the French and the German, yet entirely logical and quite satisfactory as a basis of military operation so long as their entirety was preserved. As already pointed out this probability is due to the differences in the relative values of the several principles involved, likely to be assigned by different students, as well as to individual variations in the manner of applying the various principles to specific conditions.

Any set of men who have read and studied the art of war independently and without collaboration are almost certain to have evolved varying conceptions of war and radically different individual doctrines, each one of which may nevertheless be a sound and reasonable doctrine and bring success if applied collectively by all the subordinate commanders of a military organization. But the reader will readily appreciate the utter confusion and the fatal dispersion of effort that would occur should an army or fleet be commanded by a body of men who have no common meeting ground of doctrine, and who, therefore, must rely separately upon their own differing individual conceptions and doctrines formed by independent thought and reasoning. This hypothetical condition must assume a grave aspect when it is recognized to be the condition of our own navy at the present time.

The "present war" was World War I. It is important to note that Commodore Knox was writing in 1915 and to some degree reflected allied propaganda. The fact is, as subsequent historical analysis has shown, that in the frontier battle of 14-25 August 1914 the French and German Armies met head-on in four almost simultaneous actions extending across the entire front. The French lost these battles and were forced to retreat.

There is a potentially dangerous similarity between the Army today and "the conditions of our own Navy (in 1915)." The apparent anomaly that standardization of doctrine *encourages* rather than inhibits flexibility and initiative is not widely appreciated. Nor is the reverse: That amorphous doctrine not grounded in theory requires rigid command and control which leads to battlefield inflexibility.

It should be clear, and well worth mature reflection on the part of our officers, that concerted action by a large force engaged in hostilities requires as its basis common doctrines universally understood and accepted, and that an absence of doctrine is a serious danger to any military force, particularly when opposed, as we are likely to be if opposed at all, by an enemy whose personnel possesses such a bond of mutual understanding.

One is irresistibly led to the conclusion that the formulation and promulgation of doctrine, as well as its acceptance by all concerned, is a practical and an essential element in the peace preparation for war.

It is hoped that the foregoing has shown that:

- (a) A military doctrine is distinct from a military principle, rule or method, and has an entirely different military function.
- (b) Concrete doctrine flows from a conception of war which is based upon a particular alloy of principles.
- (c) Common doctrine gives birth to harmonized methods, rules and actions.
- (d) Universal understanding and acceptance of common doctrines is necessary before concerted action by a large force engaged in hostilities is possible; it is an indispensable element of command, and an essential prelude to great success in war.

Note the relationship between the theory, principles, and doctrines of war.

#### HISTORICAL LESSONS

It would, of course, be too much to say that victory cannot be attained without adequate doctrine, yet this statement is nearer the truth than will be generally conceded. There is little or no exaggeration in the assertions that without doctrine large military operations cannot be carried on satisfactorily against a strong and active foe, and that the influence of doctrine upon victory is profound. Happily, it is not necessary to rely upon argument alone in order to prove the worth of doctrine. History furnishes a number of illustrations from which a good estimate of its value may be made.

Napoleon's first campaign, that in northern Italy against the Austrians, was marvelously well conducted and phenomenally successful. Like the victories of Frederick the Great, these results were accomplished primarily by means of the personal direction

It can be argued that our doctrinal deficiencies led to our failure in Vietnam.

of the commander-in-chief at every critical point. On one occasion Napoleon was continuously in the saddle for five consecutive days and nights because of the repeated demand for his presence at various points of the field of operations. Manifestly, that army was not indoctrinated ; nor did it require such an aid to co-ordinate action, because the force was small enough to allow the genius of its commander to be employed in person wherever success was in jeopardy.

While doctrine did not enter as a factor into these early Italian victories, that campaign nevertheless served to indoctrinate in Napoleon's conception and methods of war a number of subordinates. In consequence these men were afterwards able to successfully apply his system during operations of such greater magnitude as to render impracticable the personal supervision of the master at many crucial points.

In the campaigns succeeding his first one, Napoleon handled his army by means of orders assigning a specific task to each of the marshals or corps commanders. Whenever the latter were men who, through plastic intellect trained in Napoleonic methods, had become indoctrinated, the orders almost invariably left to their discretion the manner in which the allotted task was to be performed. In many cases, marshals who commanded practically independent armies operating in conjunction with that under the immediate direction of Napoleon, had very meager instructions, yet were so *en rapport* with the master as to co-ordinate splendidly with him. Probably the best examples of this are the operations of Davout and Lannes in the Jena campaign.

The use of doctrine by Napoleon was only one of many elements contributing to a series of incomparable successes, yet it is significant to note that his vanquished opponents relied upon the archaic method of command which was devoid of doctrine and which consequently denied discretion to subordinate leaders.

What value Napoleon himself placed upon unity of thought gained from indoctrination may be culled from his remark after Waterloo to the effect that the reverses of his late career were largely due to the fact that certain marshals "did not understand my system."

In speaking of Napoleon's failures of 1813 and 1815 the *Edinburgh Review* of January, 1912, in an article on "The Place of Doctrine in War" has this to say :

Napoleonic use of doctrine.

True, he himself, the commander, still knew what he wanted to do, but since his detachment commanders no longer played their part intelligently his army can no longer be considered controllable for the purpose in view and, as a consequence, his mastery over his army was no longer adequate. What is of importance, and of direct bearing on the training and employment of the British Army of to-day, is to examine the underlying causes of the inadequacy of Napoleon's army in 1813 and 1815 to carry out the master's conceptions. Unquestionably the material of the army had deteriorated, the ranks were full of half-trained conscripts who were not the equal in fighting worth the veterans of the Grand Armée. Yet when one thinks of how the immature lads of Victor's and Marmont's corps marched 120 miles in four days by one single road through a country almost destitute of supplies, in order to fight at Dresden, one is forced to admit that it was not the men of the French Army so much as the leaders who failed the Emperor. The leaders indeed were the weak link in the chain of command which bound the legs and muskets of the men to the mind of the commander. The story of 1813 and of 1815 is essentially the story of the failure of the marshals. This failure, if analyzed, will be seen to comprise two distinct elements: firstly, a definite want of technical skill in the handling of armies or formations of more than one corps; and, secondly, inability to follow the working of Napoleon's mind, with consequent failure to understand the method which was the expression in action of his thought.

In this same article it is further pointed out that the disastrous failures of marshals were peculiar to men who had not had the advantage of indoctrination by Napoleon. The burden of war and of government pressed so heavily upon the master's attention that he could not personally attend to the indoctrination of new marshals after old age, wounds, disaffection and death had claimed those who had been of one mind with him. To quote further from the *Edinburgh Review*:

It is not during the stress and strain of war, when every wheel of the military machine is working at high pressure to grind out concrete results in the shape of movements, operations, battles, that an army can be trained. An army is used in war; it can only be trained in peace; more especially is it only in times of peace that the minds of subordinate commanders can be tuned so as to ensure in war the unity of thought and of effort which are essential factors in harmonizing the principles of command.

The prominence given to doctrine in the German system of command has been already spoken of, and the successful manner in which, through its means, the Germans in 1866 and 1870 were enabled to operate large and widely separated forces practically as a unit, is a matter of almost universal knowledge.

Some would argue that it was "friction" compounded by enemy superiority rather than a failure of doctrine that ultimately led to Napoleon's defeat.

In preparing their army for the war with Russia, the Japanese adopted German methods. Needless to say, so essential an element of the German system of command as indoctrination was also included by the army of Japan. At the outbreak of the war the Japanese officers had been educated in the same school of thought and imbued with the same conceptions and doctrines of war. This is equivalent to saying that they thought alike about fundamentals and spoke the same military language. Consequently, misunderstandings of information, reports, or of the intention contained in orders were reduced to a minimum. The various major and minor detachments of the army were enabled to proceed freely with the tasks before them; secure, as each situation developed, in the knowledge of the exact manner in which all the other commanders affected by the same circumstances would act.

With the Russians in Manchuria, on the other hand, it was a very different story. Their officers were not well educated technically and had no such thing as a coherent doctrine known, understood, and acquiesced in by all. Therefore, there was great dispersion and conflict of effort; internal friction was so great as to require most of the energies of the various commanders to overcome it rather than the enemy. In his book on the war General Kuropatkin often complains of the conflicting beliefs of the subordinate commanders with regard to the training of troops and their employment in the field. He writes:

Although the same drill books and manuals are used by the whole army, there is considerable variety in the way the tactical instruction is imparted, owing to the diverse views held by the district commanders. . . . Our troops had been instructed, but what they had learned varied according to the personal idiosyncrasies of this or that district commander. The stronger the officer commanding a district, the less did he feel bound to abide by the authorized method of instruction and training laid down in the existing drill books.

In an effort to remedy this condition, Kuropatkin issued comprehensive tactical instructions to his army soon after taking command, and supplemented these by subsequent instructions. The difficulties of indoctrinating an army or navy faced by an active enemy are obviously great, and a military or naval force so ill prepared as to require such treatment at so late a date is badly handicapped in its endeavors to act as a unit.

That the lack of doctrine was the principal deficiency in the British Army responsible for the severe reverses in South Africa,

This state of affairs has changed dramatically. Evidently learning from their defeat present Soviet military doctrine is well-developed and promulgated through an extensive military officer education system. Building from official policy pronouncements on the nature and theory of war, their doctrine emphasizes not only strategy and tactics but also a dimension missing from current US doctrine—what they call “operational art”, and Jomini called “grand tactics.”

General Kuropatkin, a former Russian minister of war, commanded the Russian field army in Manchuria during the 1904 Russo-Japanese War.

Lack of initiative among field commanders in the Boer War grew out of the doctrinal deficiencies of the British Army, deficiencies which also plagued them during World War I.

is a fact which need not be supported here by lengthy discussion. It will be sufficient to state that this opinion is held by several eminent authorities, among them General Langlois of the French Army. Probably no more exhaustive study of this war has been made than that by the historical section of the German Great General Staff, which body reaches the same conclusion.

The foregoing illustrations should be sufficient to establish the fact that indoctrination is so essential an element of command that success without it is difficult. But the conservatism of the naval mind is such as to forbid the general acceptance of any new belief or doctrine which is deduced from the history of land warfare alone.

Happily one of the best illustrations of the importance of doctrine to command, and of its use in accomplishing conspicuous success, has been bequeathed by no less a naval genius than Nelson.

The persistent and ceaseless way in which through many years he educated and trained his captains in his own original school of tactical thought is too well known to require more than mention here. He made them almost literally of one mind with himself, so that their acts in the face of the enemy were remarkably harmonious and well co-ordinated in spite of an extraordinarily small number of signals. At Trafalgar, for example, but four tactical signals were made by the commander-in-chief from daylight until about 4 p. m. In the interregnum the fleet of 33 ships were formed for battle, maneuvered through about six hours of an approach, and then fought an opponent of 40 ships for about four hours until decisive victory had been gained. The share that mutual understanding coupled with common convictions (which in effect is doctrine) had in this performance must necessarily have been very great.

The plan given in the famous memorandum of course contributed largely to the mutual understanding as well as to the victory. But it is very essential to the student to note and to comprehend thoroughly that no plan, however well it may be expressed, can possibly be co-ordinately executed by a large force of vessels of several types operating against a strong and efficient enemy, unless the squadron, division and ship commanders have the same conceptions of war as their commander-in-chief and are well indoctrinated. It cannot be reiterated too often that on the water the element of time will invariably prevent any effective co-

Note the importance the German Great General Staff placed on "exhaustive study" of the British campaigns in the Boer War.

dination which depends upon signals, radio messages or written instructions. The only satisfactory method of ensuring unity of effort lies in due preparation of the *minds* of the various commanders, both chief and subordinate, before the outbreak of hostilities. Such preparation comprehends not only adequate tactical and strategic study and training, but also a common meeting ground of beliefs as to the manner of applying principles to modern war.

One does not have to seek far in history to find evidence of the employment of doctrine by such successful naval leaders as Agrippa, Suffren, Tegethoff and Togo. No British admiral except Nelson used it to any marked extent. He sustained no defeats and his victories were conspicuously decisive, while the fights of his kindred admirals never resulted in better than the gaining of a slight advantage.

Moreover, history shows that the badly vanquished fleets have been invariably almost devoid of doctrine. Rodjesvensky, Persano, Villeneuve, Brueys and Antony almost wholly neglected this important matter. Suffren suffered four defeats before scoring a success. The principal change that took place in his fleet between the first fight and the last one was that only finally did he succeed in appreciably indoctrinating his captains.

The lessons to be derived from the foregoing historical examples, both military and naval, are plainly apparent. The service which neglects so essential a part of the art of war command as the indoctrination of its commissioned personnel, is destined to fail in its ambitions for great achievement.

Until very recently the British Army was not indoctrinated and the process is probably not yet satisfactorily completed. Their navy is believed to be behind the army in this respect, which may partially account for some recent disappointments; more especially so when it is remembered that the German Army has been well indoctrinated for 40 years and that the Germans are not the kind of people likely to omit so well tried and fundamental an element of command from their sea fighting organization. The Japanese Army is patterned after that of Germany and is indoctrinated; that they have incorporated the same feature in their navy is probable. The advantages of indoctrination has been recognized for a number of years by the foremost French naval students and writers; that their opinions have borne fruit is more than likely. Of all the great navies, our own is probably alone, in completely ignoring this great aid to the waging of decisive war on the sea.

Note "the lesson" of history that doctrine is key to battlefield success.

#### METHODS OF DEVELOPING DOCTRINE

Within the last two years efforts have been made in our fleet to develop minor tactical doctrine for certain forms of operations. The method used was to crystallize opinion by discussion in conference, of maneuvers held with ships or on the maneuver board, and to adopt the general terms of the consensus of opinion as the governing doctrine. Once determined in this manner the doctrine was promulgated in official written form as the prescribed future general guide to conduct under circumstances similar to those in which experience had been gained by maneuvers. In this way a basis for mutual understanding was progressively evolved which had been reached by utilizing general rather than individual experience and opinion; and which represented the convictions of the majority and the concurrence of all.

Such procedure naturally resulted in the enthusiastic interest of all in the maneuvers, with a consequent gain in tactical development, and was found also to greatly facilitate co-ordination between ships and divisions on many occasions when communication between them was impossible.

Incidentally also, but of great importance, the existence of the doctrine made it possible to simplify and reduce in length the initial and subsequent orders necessary to be issued to carry on the operations. For example, on one occasion, with the doctrine in force, a night maneuver involving the co-operation of about 20 ships and extending over a period of about six hours, was executed exceedingly well in spite of the fact that before the maneuver began the captains were given no information, and no instructions were issued by the commander of the force at any time beyond those contained in a radio order of 44 words sent out at the commencement of the exercise. During the preceding year, practically the same force had performed an almost identical maneuver. In that case, when operating without the advantage of the doctrine, complete information and orders were necessarily issued several days in advance to ensure due understanding by all of the task to be accomplished and to provide for proper co-ordination during the execution of the maneuver. The orders on this occasion contained over 1200 words and were accompanied by two blueprints showing the track to be followed by each vessel of the force.

While the practical work outlined above has been valuable, and has demonstrated more convincingly than any amount of theory could do the extreme importance of doctrine towards the effective co-operation of vessels acting jointly under conditions to be expected during hostilities, its scope is obviously too limited to be considered as a comprehensive indoctrination for war.

It is manifestly desirable that doctrine should not be built up, from the little things to the larger ones, separately in each branch of the profession as we have done in gunnery and as indicated above to a tentative and minute extent in elementary tactics; but that if effort in all branches is to synchronize, the start should be made at the top. The big questions of policy should first be settled as well as those of command, strategy, tactics, logistics and matériel. Then from such basic decisions minor doctrines may be reasoned to flow logically and consistently so that all parts of the grand scheme will be consistent and harmonious.

In all modern armies manuals are issued for the guidance of officers in the peace training of the men. In addition instructions are issued to govern the general methods and the details of handling the troops in the field. The latter are known as "Field Service Regulations." It is of course intended that these various manuals and instructions shall produce uniformity throughout the army in all essential minor particulars, and, therefore, since they furnish a basis for mutual understanding in the execution of certain principles of secondary importance these manuals may properly be considered as prescribing minor doctrine.

We of the navy are entirely familiar with this form of instruction. For years we have had manuals for guidance in our various lesser activities. We have Infantry and Artillery Drill Regulations, Ship and Gun Drills, The Boat Book, and Gunnery Instructions, as well as the Tactical Signal Book which regulates the interior maneuver of ships in formation. All of these provide for a degree of unity of thought and action along certain lines of smaller consequence.

Yet there is a vital difference between our naval manuals which prescribe minor doctrine and those of the modern army. Ours do not flow from anything higher up, but represent merely a detached work unrelated to other branches of the profession. Almost invariably they are prepared by a board of officers, many of whom have no greater qualification for the task than that of

Note Commodore Knox's argument that doctrine should be built from the top down rather than from the bottom up—i.e., that doctrine should develop from theories and principles rather than be derived from tactics.

being good all around officers. The product of the board is normally the personal opinion of one or two of its best prepared members, based upon their own study and experience, which is necessarily limited and incomplete. From time to time the manuals are revised, usually by an entirely new board, which inevitably injects its own personal equation into the new instructions. Consequently our manuals are not comprehensive and do not possess the close relationship which is desirable. The revisions do not develop the subjects in an orderly, logical and systematic manner but, due to variable conceptions and doctrines, produce confusion of service thought and practice. This criticism must be tempered when applied to the gunnery manuals, which have been evolved principally from service opinion and therefore do not contain the defects that necessarily creep into the products of haphazard boards. But the tendency to regard the subject of gunnery as detached and more or less unrelated to the employment of the navy as a whole is noticeable even in this excellent manual.

On the other hand, the army manuals of a first-class power are written by the general staff, which prepares itself for the task first by an exhaustive study of history and war, as well as of the material, political and other conditions which confront their country. From the results of this study is evolved a *conception of war* as it should in its opinion be best conducted. When this broad, comprehensive work of information and that of reflection is completed, and not before then, the general staff having evolved its conception of war formulates its fundamental major doctrines of war, which are made to flow logically from the reasoned conception. So far it is a grand estimate of the situation, with major doctrine representing the grand decisions. From this is sequentially deduced lesser doctrines to be applied in every field of activity. Some of the numerous products are the various manuals and field service regulations which, therefore, fit in perfectly with the grand scheme. The whole is consistent, coherent and cohesive.

Hence it is apparent that to the modern army doctrine is something very real, exceedingly important and decidedly practical. On this side of the water, both ashore and afloat, we are prone to regard doctrine as being evanescent and purely academic—a matter of interest only from a theoretical standpoint. In so doing we eliminate from our services one of the most important elements of military command and a potent aid to victory.

Note the relationship between fire and maneuver.

It must not be supposed that the foreign general staffs dogmatically impose their doctrines upon the armies. On the contrary they are careful not to do so, because doctrine which is welded into the organization by the ardent convictions of the body of the personnel is incomparably more effective than that which depends for its support solely upon orders and discipline. Consequently the greatest pains are taken to convert the army to the reasoned beliefs of the general staff. The historical section of the general staff publishes to the service analytical studies of field practice maneuvers and of past campaigns, in which the causes for successes and reverses are carefully explained in such a way as to illustrate and to emphasize the soundness of the doctrines which are advocated, as well as the conceptions of war from which such doctrines have been deduced.

When nations foreign to themselves engage in war, officers are sent from the general staff to observe and record the operations. From the data thus obtained, as well as from other information, the historical section of the staff writes a history of the war and publishes it to the army. Such works are by no means mere records of events, but are profound studies of them. Like the treatment given to maneuvers and previous history, every aspect of the campaign is critically analyzed and the true cause of every important effect is deduced, and arguments are set forth with great care to prove the correctness of the doctrines which pervade their own army. No such accurate, comprehensive and illuminating histories of wars have ever been written than those of the South African and the Manchurian campaigns by the general staffs of the German, French, English and Japanese armies.

In this manner are the convictions of an army strengthened and its morale correspondingly elevated. There is no more important work in time of peace than thus to lay the foundations for united and enthusiastic action after the outbreak of hostilities and for decisive victory as their conclusion.

#### CONCRETE APPLICATION TO OUR OWN CASE

The author has tried to make it clear that the first and most essential step in the process of so indoctrinating a military service as to ensure co-ordinate action during hostilities, is to improvise and formulate a concrete, comprehensive and coherent conception of modern war.

The importance of a conception (theory) of war.

Napoleonic war was based upon the conception of first shattering the morale and weakening the command of his opponent's army by jeopardizing his communications, and then delivering a concentrated decisive attack in great force at a critical spot in the enemy's line. Moltke's conception, and that of the French following 1870, have been already explained. For the Manchurian campaign the Japanese adopted the Moltke conception. Nelson's conception of a concentrated attack upon a part of the enemy, followed by a close and decisive action at that point *before* it could be supported, is too well known to require explanation here. The essential point to be noted is that all brilliant military achievement of modern times with large forces has been preceded by the creation of a conception of war suited to the weapons and conditions of the times, which conception has furnished the basis for indoctrination of the entire force in all branches of activity. That such procedure has been one of the cardinal elements of great success is the opinion of many of the most eminent military authorities of the present day. Similarly, as previously stated, the lack of a comprehensive conception is by many great students considered one of the principal reasons for the failures of the British in South Africa, and of the Russians both ashore and afloat during their war with Japan.

Doubtless the French and Germans have recently brought their shore conceptions up to date. Had either of them failed to do so there might not have been the same equality of advantage as now exists between the two armies, notwithstanding the unprecedented numbers, length of line, power of weapons and other novel conditions presented by the situation.

Whether or not any navy has formulated a conception of modern naval war is unknown to the writer. But in view of the fact that some of them possess general staffs, one of the recognized functions of which is to perform this kind of duty, it is probable that they have not only created the conceptions but have also deduced the doctrines which logically flow therefrom. Consequently it is of great importance that we do likewise if we are to meet any possible enemy as well prepared. The fact that we have no general staff cannot possibly serve as an excuse for neglecting this important matter. The work could probably best be done by a general staff, which fact is one good argument for the creation of such a body; but it is not the purpose of this paper to stray into an appeal for a general staff.

As previously indicated the task of creating a conception of naval war necessarily involves profound and exhaustive study and analysis of naval campaigns, followed by closely reasoned constructive work. In the absence of genius this can be done properly only by a reflective body of officers, qualified from sea experience and professional study, and also by systematic education and training in the methods of war such as may be acquired at our Naval War College.

Once the difficult inductive reasoning necessary to the creation of a conception of war has been done the reflective body can proceed with the easier deductive processes of evolving doctrines out of their basic conception. In the latter work it is imperative that the active fleet be utilized if an objectionable academic taint to the doctrines is to be avoided. The reflective body of officers should co-operate with the commander-in-chief of the active fleet in planning maneuvers, should be embarked in the fleet during their progress and should carefully observe, record and subsequently analyze them. The results so obtained should be used in formulating new or modifying old doctrines, the nature of which is necessarily to some degree tentative and demands that it be acquired progressively. In other words, the creation of doctrine is an evolution.

We of the navy are familiar with the astute manner in which the department has used the collective mind of the service in bringing gunnery up to a high level of efficiency. Competition was introduced to stimulate keen interest which was also further fostered by a system of rewards. In addition the entire personnel was taken into the confidence of the target practice office, thus producing a "team spirit" which engendered the personal enthusiasm of every man and officer afloat in the evolution of gunnery, as well as infused all with a pronounced conviction that we were, as never before, preparing for battle along correct lines.

Some such general method is manifestly necessary before any great progress can be made in the essential higher preparation and training for fleet action and for war in the comprehensive sense.

After the preliminary work has been done by the reflective body, of inductively improvising a grand conception of naval war, from which it might also deduce a few broad general doctrines, the results should be published to the service together with the processes of reasoning which led to the conclusions. This should be

presented in such manner as will win the warm conviction and support of most officers. Comment and criticism should be invited and also published.

The carefully planned fleet maneuvers should be put on a competitive basis; otherwise the interest necessary to obtain the best thought of the officers may not be aroused.

Most important of all, the maneuvers should be followed by a free discussion in writing and in conferences by all officers above a certain rank, not too low, say lieutenant. Only in this manner can the service be made to feel that the resulting doctrines are born of themselves and not imposed upon them, and such sentiments are absolutely required before the collective mind, which is akin to genius, can efficiently be utilized.

Only by some such general method will it be possible to arrive at definite conclusions concerning the larger questions of the profession. All will agree that the present rather aimless drifting of thought in these matters should come to an end if we are ever to bring the navy to the point of real readiness for major hostile operations. It is true that there is danger in undue rigidity; but while by the method advocated, thought and doctrine will become partially solidified, it will also remain sufficiently plastic and tentative to permit changes which will inevitably be necessary from time to time to keep up to date. Without change, there can be no progress; the acquisition of doctrine is not only a process requiring the utilization of the collective mind of the service, but is also a never-ending progressive one.

To reach the ultimate goal of war efficiency we must begin with principles, conceptions and major doctrines, before we can safely determine minor doctrines, methods and rules. We must build from the foundation upwards and not from the roof downwards.

For example, it is important to determine whether our strategic and tactical operations shall be offensive or defensive in character, and whether they are to be introduced by "secondary warfare" (mines, destroyers and submarines) or by "primary warfare" (the employment of the whole force); whether the fleet will form in ordinary simple column or in an alignment of groups; whether a parallel fight is to be sought or a concentration of superior force at one or more points, and if the latter how and where; whether each type of ship will be concentrated or the whole

Again the stress on the importance of theory as the foundation for doctrine.

force divided into groups, each comprising several types; whether we will attempt to fight by exterior or interior lines; whether destroyers are to endeavor to cripple the enemy by a night attack preceding the general engagement or to be used only during the main fleet action; whether submarines shall adopt eccentric plans or be utilized jointly with the rest of the fleet; whether information is to be obtained by wide flung distant scouting or only by close scouting; whether our system of command is to provide the freedom of the initiative to subordinate commanders or will depend upon centralized direction by the commander-in-chief, etc.

The determination of such matters as these produces a "conception" of war which furnishes a point of origin, without which we are as uncertain of our bearings as a vessel in a fog. To leave such questions to the individual choice of succeeding commanders-in-chief invites the present state of chronic indecision and chaotic confusion of thought throughout the service, and debars us from the benefit of permanency in any progress that may be made.

In concluding this paper it is not out of place to call attention to the fact that the need for unity of service thought is not confined to the floating forces. The preparedness of the fleet for war is closely related to the efficiency of the shore establishment, from which its material wants are filled and upon which it depends for the inception and general direction of its active work.

The Navy Department is composed of a number of semi-independent and somewhat loosely organized and co-ordinated divisions, bureaus, boards and offices, all under the charge of a civilian head who is dependent upon them for advice on technical and military questions. With the best and most honest intentions, the departmental advisers must necessarily give conflicting counsel unless they belong to the same school of thought; and when no school of thought exists it is inevitable that nearly every officer should have a somewhat different viewpoint and should often hold an opinion at variance with that of every other officer. Consequently it is to be expected that not infrequently each one of the Secretary's advisers will differ in his recommendations from all of his contemporaries in office, and that rarely can a consensus of opinion on any given question be reached.

The disastrous results that must follow a failure in Washington to hold similar views about fundamentals are apparent. There

can be no fixed policies, no enduring organization, no uniformity of rules and methods and no stable progress. Fleet efficiency must become the football of momentary expediency. Things done to-day will be undone to-morrow and again done the day after. Who is to blame? Surely not the civilians of the government who have long since learned to regard professional advice with suspicion. It is we ourselves who are at fault and we can fairly blame neither Congress, our form of government, the un-military characteristics of the people nor any civilian official.

There is no complete cure for any bad condition, and it would be foolish to claim that universal concurrence in a school of thought could absolutely eradicate all these evils; but on the other hand, in the opinion of the author, such a remedy would go farther to alleviate the troubles indicated at the seat of government than any other single measure that could be adopted.

Both ashore and afloat we, therefore, imperatively need first of all a *conception of war*. Once this is created we will be enabled to proceed, with our eyes open and our course well marked, towards a coherent comprehensive scheme of naval life. Doctrine, methods and rules may be made to flow consistently and logically, therefrom. Strategy, tactics, logistics, gunnery, ship design, ship exercises, shore and ship organization and administration—every ramification of the profession—may be developed with confidence and wisdom, and harmoniously interwoven to produce, not merely the present heterogeneous body with a few efficient parts, but exclusively efficient parts well knit into a competent and homogeneous body.

The importance of doctrine in providing a foundation for professional advice to our civilian leadership.

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